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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,229	08/20/2003	Sigang Qiu	P16581	5721

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EXAMINER

TRAN, QUOC DUC

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/644,229

Applicant(s)

QIU, SIGANG

Examiner

Quoc D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5, 6, 9-14, 20, 22, 23, 25, 26, 28, 41 and 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 9-14, 20, 22, 23, 25, 26, 28, 41 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-6, 9-14, 20, 22-23, 25-26 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamali et al (2004/0258000).

Consider claim 1, Kamali et al teach a method comprising: performing at least part of a digital subscriber line handshaking process by transmitting at least one handshaking signal to or from a DSL modem via a telephone subscriber loop; and analyzing the at least one handshaking signal to detect estimated length of the telephone subscriber loop (see ¶ 0005).

Consider claim 2, Kamali et al teach the method further comprising: determining an operating function of an item of terminal equipment connected to the telephone subscriber loop based at least in part on the estimated length of the telephone subscriber loop (see ¶ 0030).

Consider claims 3, Kamali et al teach wherein the determining includes determining whether to perform trellis coded modulation in the item of terminal equipment (see ¶ 0034).

Consider claim 5, Kamali et al teach wherein it is determined not to perform trellis coded modulation in the item of terminal equipment if the estimated length of the telephone subscriber loop is less than a predetermined length (see ¶ 0025, 0034).

Consider claim 6, Kamali et al teach wherein the item of terminal equipment is a digital subscriber line modem (see ¶ 0022).

Consider claim 9, Kamali et al teach wherein the analyzing to detect the estimated length of the subscriber loop includes comparing a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers (see ¶ 0033).

Consider claim 10, Kamali et al teach wherein the analyzing to detect the estimated length of the subscriber loop also includes comparing a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers, wherein each signal carrier of the first group of downstream signal carriers is at a higher frequency than each signal carrier of the second group of downstream signal carriers (see ¶ 0030-0033).

Consider claim 11, Kamali et al teach wherein the analyzing to detect the estimated length of the subscriber loop includes comparing a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers, wherein each signal carrier of the first group of downstream signal carriers is at a higher frequency than each signal carrier of the second group of downstream signal carriers (see ¶ 0030-0033).

Consider claim 12, Kamali et al teach the method further comprising: determining, based at least in part on the estimated length of the telephone subscriber loop, a parameter for a digital subscriber line training process (see ¶ 0023).

Consider claim 13, Kamali et al teach wherein the determined parameter is used for one of (a) an equalizer function, (b) a timing recovery function, and (c) an automatic gain control function (see ¶ 0023, 0024).

Consider claim 14, Kamali et al teach the method further comprising: predicting a digital subscriber line service data rate for the telephone subscriber loop on the basis of the estimated length of the telephone subscriber loop (see ¶ 0030-0033).

Consider claim 20, Kamali et al teach an apparatus comprising: a memory; a processor coupled to the memory to: receive at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and analyze the at least one handshaking signal to detect an estimated length of the telephone subscriber loop (see ¶ 0005, 0019).

Consider claim 22, Kamali et al teach wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length (see ¶ 0034).

Consider claim 23, Kamali et al teach an apparatus comprising: means for receiving at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and means for analyzing the at least one handshaking signal to detect an estimated length of the telephone subscriber loop (see ¶ 0005).

Consider claim 25, Kamali et al teach the apparatus further comprising means for determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length (see ¶ 0034).

Consider claim 26, Kamali et al teach an apparatus comprising: a storage medium having stored thereon instructions that when executed by a machine result in the following: receiving at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and analyzing the at least one handshaking signal to detect an estimated length of the telephone subscriber loop (see ¶ 0005).

Consider claim 28, Kamali et al teach the apparatus further comprising instruction for determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length (see ¶ 0034).

3. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamali et al (2004/0258000) in view of Johnson (6,845,248).

Consider claim 41, Kamali et al teach a system comprising: the digital subscriber line modem including: a memory; a processor coupled to the memory to: receive at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process (col. 4 line 62 – col. 5 line 16); and analyze the at least one handshaking signal to detect an estimated length of the telephone subscriber loop (see ¶ 0005, 0019).

Kamali et al did not suggest the system comprising a radio frequency transceiver; and a digital subscriber line modem coupled to the radio frequency transceiver, However, Johnson suggested such (see Fig. 2).

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Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate the teaching of Johnson into view of Kamali et al in order to provide communication with the modem wirelessly.

Consider claim 43, Kamali et al teach wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length (see ¶ 0025, 0034).

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-3, 5-6, 9-14, 20, 22-23, 25-26, 28, 41 and 43 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

**(571) 273-8300**

Hand-delivered responses should be brought to:


Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Quoc Tran** whose telephone number is **(571) 272-7511**. The examiner can normally be reached on M, T, TH and Friday from 8:00 to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Curtis Kuntz**, can be reached on **(571) 272-7499**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600** whose telephone number is **(571) 272-2600**.

**QUOC TRAN**  
**EXAMINER**  
  
AU 2643

November 26, 2005